Green ng koryente sa Payatas – electrifying the slums

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During July/August 2013, I conducted research into the potential for renewable electrification of one of the most deprived slums in the Philippines, Payatas. The experience in itself was invaluable, and the interactions I had with many of the residents were rewarding; both for myself, and hopefully for all of those involved.

The aims of the project centre on sustainability and renewable energy, with a view to using this to enhance the quality of life of the slum's residents. As I discovered, there is a heightened awareness of 'green' issues in the Philippines, which made talking to people about energy and sustainability easier.

The great variation in economic and social conditions between households in Payatas was unexpected, and has added nuances to my research that I had not anticipated. From talking to people I gained a more accurate picture of Payatas, and the ways in which it functions – for instance the settlement is not comprised entirely of the very poorest. Although there is a huge amount of poverty, particularly nearest the dumpsite, there are also many households that could be considered relatively well-off in comparison to others in the community. Households of different economic conditions are integrated throughout Payatas, so there is no 'ghettoisation' or separation based on

economics. This means that any attempt to install decentralised renewables or extend larger-scale grid-integrated renewables would have to adapt to the economic variation, for instance by improving the existing subsidy system.

I noticed a lot of themes that were not integral to my research but have an enormous impact on the everyday lives of people living in Payatas. These include things like religion, and the bureaucracy associated with accessing services, particularly as a poor person. I have written about these subjects on my blog – I've included some of the highlights at the end of this report. I spent some time talking to residents with a Catholic priest, which made people much more willing to talk to me, although in some respects I found this difficult.

Figure 1 Jesse, Arnel and Father Paul in Phase Three, Payatas

Although I have not been able to include all the themes I would have liked in the final write-up of the project, I was able to see and get a sense of the bigger picture of what is going on in Payatas. Without the experience of going, physically seeing, and spending time in the slums, I would not have been able to get such a good grasp of the way things work and the experience of people there. That in itself provided me with a more holistic view that I would never have been able to get from secondary data and the experiences of others.

Figure 2 Housing near the stream in Phase Three, Payatas

I arranged several meetings with engineers from the biogas project and the Department of Energy, which were insightful and informative. Viewing my research questions from both the official and governmental perspective as well as the more immediate perspective of Payatas inhabitants provided the depth that I wanted. This also allowed me to explore ideas that I had not previously conceived of, such as illegal electricity abstraction.

During the research period I enhanced my skills in a variety of disciplines due to the interdisciplinary nature of this study – I am now more adept at overcoming the difficulties that can arise from taking meteorological measurements and formulating research questions for useful interview data. The experience also allowed me to navigate cultural and social differences with sensitivity, and in a way that was gratifying for everybody involved.

Twice a day throughout the month, I measured the wind speed at 4m, which I can now use to extrapolate up to the height of a hypothetical turbine. I also measured things like cloud cover and compared the measurements with secondary data obtained from sources such as the Meteorological Observation station in Quezon City, NASA, and the University of Lowell. I also intended to measure the flow rate of the Marikina River at Montalban station to ascertain the potential for hydroelectricity, but because of the heavy rain and flooding while I was there, this was not possible. This was unfortunate, but I was able to work around it and use secondary data from researchers with the University of the Philippines, and from previously published papers.

I was able to get a real feel for life in Payatas because I travelled with my partner, who has lived in Payatas for nearly 2 years (intermittently), and has a large number of friends and contacts. This allowed me easier access, and

meant that people were more forthcoming and welcoming, particularly as language is less of a barrier for him. I got involved in community life, spending time with local people and learning some Tagalog myself. What I observed deepened my understanding of the area, and although it may not directly inform my research, I got a better idea of what life is like there. I saw what electricity means to people, how it improves lives, and how 'green' alternatives are emphatically preferred to traditional energy sources.

Socialising in the street, smoking and playing basketball, allows people to spend time outside what are often crowded houses. The concept of community is very strong in Payatas, which led me to believe that renewable electrification would be best done utilising decentralised, community renewables, such as community solar PV cells or turbines. It would be easy to integrate such projects into existing infrastructure, perhaps making use of community buildings such as youth centres, churches and basketball courts.

Figure 3 Playing basketball in the street in Manila Hills

The observations that I made from being accepted into the community so readily have been incredibly useful. I would not have been able to talk to people in the same way had I not been living with locals – the westerners who live in gated communities often have a very detached sense of what life is like in the Philippines and may never really see the culture of the place. I am therefore very lucky to have been given the opportunity to do integrated and holistic research. I am *extremely* grateful to the Wilkinson Scholarship fund for giving me the chance to do the research I am so passionate about, which would not have been possible without funding. Thank you!

Electric Highwaymen

Jumping the meter wall in Phase 3

During my trips to Payatas I learned a lot about something which is at best a sideline in my research, but which goes far deeper than it superficially appears. Illegal electricity abstraction is fairly common in certain areas of Payatas, particularly closest to the dumpsite, and in Phase 3. 'Jumpers' who connect wires to the grid cables to extract electricity run the risk of electrocution, house fires and death – the month before we were there someone died from fixing a dodgy connection. The need to connect to an electricity supply in order to be a part of the modern world is just that – a need, albeit one produced by globalisation (which is extremely visible in the Philippines). It is not exactly like the appliances people use are decadent – a single light bulb to illuminate what are often dark houses because they are all built so close together; an electric fan to move the sweltering air and keep the mosquitoes away; a TV to feed the desire to consume and reinforce the inequality that is already so huge; a fridge to reduce the drudgery of living literally hour-to-hour, day-by-day. All of this of course if they can afford it. The electric company that supplies Payatas, Meralco, already has most expensive rates in the country, and there are no alternatives in the area except home-generation, which precious few people can afford in the city, let alone in Payatas. Furthermore, they have specific conditions about what type of buildings they will connect to the grid; namely that a dwelling must have a

discernible kitchen and C.R. (bathroom). However, the poorest people often live in poor-quality housing that does not satisfy these conditions, making them ineligible for a legal, metered electricity supply. To access the modern world in even the most minor of ways these people must therefore obtain their electricity via a profiteering intermediary, who charges extra for an illegal sub-metered connection to a legal mother-meter, held under a Meralco account. Of course these intermediaries may also be victims of the system of poverty themselves – not racketeering but merely scraping a subsistence wage – but their existence simultaneously perpetuates the system whereby the poorest are charged the most for electricity, and is a symptom of it. It is a clear expression of what Oscar Wilde and Robert Tressell called "altruism" and "philanthropy", respectively, describing the wage-slavery of the British working classes at the turn of the last century. The poorest people are charged the most money for energy, their money lining the pockets of fossil fuel magnates and corporations in a country that still has an ongoing problem with corruption. This, while the richest ex-pats and elites in their gated sub-divisions and third homes avoid fully paying taxes and electricity rates via creative accounting, reporting and golden hand-shaking. The system that allows companies to enforce poverty by only providing energy to those who are considered to be living in 'proper' dwellings, while depriving those very people of such decent housing is itself corrupt, and moribund. The 'jumpers' and the middlemen may be doing something illegal in 'stealing' electricity in the eyes of the legislature that upholds the status quo, but they are truly victims of an immoral and deformed system; a system that is stealing from *them.*

Religion

I guess I must declare from the outset of this post that I am an atheist. Of course this doesn't mean anything for anyone else – in fact I think religion is a great thing if it works for a person, it just doesn't for me, thanks to my ruthlessly logical and scientific mind. Being able to find solace, or courage, or meaning in religion is wonderful, and I have seen that it can do amazing things for people. My problem therefore is not so much with spirituality, but with organised religion. I encountered a lot of both in the Philippines, some of which made me feel incredibly uncomfortable, and some of which I didn't mind at all. It is a very Catholic country (something that is a relic of Spanish colonialism, with which I have a whole other set of issues entirely), which is sometimes overt, for instance in the case of the insular Iglesia ni Christo churches, but often it is not. Nevertheless, I was not bothered by the presence of religion in most places I went.

During my stay, we spent some time with a priest, Father Paul, who is amazing, and deservedly well respected in Payatas for the incredible things he has done. Because Filipinos are so religious, he has been able to achieve some very positive things because he is a priest, and people are generally more receptive to what he has to say, which at times can be fairly radical. In such an environment, an enlightened and respected individual like him can make a far greater difference than anyone else, particularly western 'experts'

or researchers who haven't got a clue what's going on (myself included). However, because priests have so much authority, it matters what they have to say, and who they are – everyone has a worldview, and everyone has an agenda. My concern is more that the church impedes development in the Philippines, while those doing truly good work are in the minority.

At the moment, there is a bill going through Parliament called the Reproductive Health (RH) Bill. As could probably be predicted it refers to universal access to information about things like abortion, family planning and contraception. As could also be predicted, the Catholic Church is vehemently against it, and implementation of the law has been delayed as a result of opposition. On the side of one church we saw a sign that proclaimed the government should be opposing the RH bill because it would a) create terrorism, b) (I paraphrase) turn children into sexualised monsters and c) create poverty. The ridiculousness of this sign is most scary because people are taken in by it. In what world does being able to choose whether or not to have a child create more poverty? Surely, it does the exact opposite. The imposition of the Church's fearful remonstrations and opinions is what I find disgusting – taking away from people who often lack access to basic sex education the right to think for themselves and take control of their own bodies, families and lives.

Of course, I found the expectation to sing hymns and say grace a strain too, but those are the kinds of things I can deal with out of respect for the people I am with. Besides, I find the expectation to sing karaoke a strain too, even at the best of times (i.e. two bottles of Red Horse down). It is only when I see the flagrant abuse and institutionalised, systemic undermining of progress by the Catholic church that I have a problem with it. It is under these circumstances that one can really see where Marx was coming from when he spoke about religion being the "opiate of the masses". The Catholic Church is bad enough, but the cultish Iglesia ni Christo is far worse. The stories I heard about the links to big money and organised crime are enough to turn your stomach, even before you consider the positions it takes and the way it tries to place its ministers into promising government positions.

My experience with the particular Filipino brand of religion was thus pretty mixed. On the one hand it felt incredibly overbearing, and a hindrance on the personal development of people, and on the development of the nation as whole. Meanwhile, on the other, I felt that on an individual level it gave people hope and purpose – which can't be derided. I feel that the problem is when religion is used imperialistically, much as it is elsewhere in the developing world. Spirituality supersedes borders, whereas organised religion is often needlessly used to realise ulterior ambitions – and therein lies the problem.

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